

REMARKS

Reconsideration of this application is respectfully requested. Claims 20-38 are pending.

Obviousness-Type Double Patenting Rejection

Claims 20-38 have been provisionally rejected for obviousness-type double patenting over claims 1-8 of U.S. Patent Application No. 10/984,536 ("the '536 application"). The '536 application was abandoned in favor of a continuation application, U.S. Patent Application No. 11/625,554 ("the '554 application"), which is currently pending. Claims 1-8 of the '554 application are identical to claims 1-8 of the abandoned '536 application, except claim 1 of the '536 application specifies that escitalopram is administered orally, while claim 1 of the '554 application does not specify any particular route of administration. For purposes of this response, applicants assume that the same provisional rejection is raised based on the '554 application. Applicants respectfully request that this rejection be held in abeyance because the application containing the conflicting claims has not been allowed and has not issued as a patent.

Obviousness Rejection

Claims 20-38 have been rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,943,590 ("Boegesoe"), in view of U.S. Patent No. 5,789,449 ("Norden"), the Merck Manual (16th ed., 1992, p. 1791), and applicants' alleged admission of the prior art. The Examiner cites i) Boegesoe for its teaching of escitalopram as a selective serotonin reuptake inhibitor ("SSRI"), ii) Norden as teaching a method of treating premenstrual syndrome (PMS) using a serotonin reuptake inhibitor, and iii) the Merck Manual as teaching that depression is a symptom of PMS. The Examiner relies on the present specification for its disclosure that clinical studies of depression and anxiety disorders indicate that the rate of resistance or non-response to SSRIs is substantial. According to the Examiner, it would have been obvious for one of ordinary skill in the art to treat PMS with escitalopram because depression associated with PMS can be treated with escitalopram.

Applicants respectfully traverse this rejection and request reconsideration.

To reject a claim as obvious based on a combination of prior art elements, the Patent Office must articulate the reason why a skilled artisan “would have recognized that the results of the combination were predictable” (Examination Guidelines, Department of Commerce, *Federal Register*, 72(195):57526 (October 10, 2007)). Applicants submit that this requirement has not been met. The cited references would not have led a person of ordinary skill in the art to predict that escitalopram would be effective at treating PMS in a patient who has failed to respond to initial treatment with an SSRI other than escitalopram.

The claimed population is a group of patients that have failed initial treatment with an SSRI other than escitalopram. According to the Examiner, if a patient did not respond to a particular SSRI, it would have been obvious to a skilled artisan to administer another SSRI with the same reasonable expectation of successfully treating PMS (*see* Office Action, page 7). This position is not well founded because the claimed population has *already failed* treatment with an SSRI. Based on the treatment failure, a skilled artisan would have predicted that a different SSRI would also fail because SSRIs have the same mechanism of action, i.e., selective inhibition of serotonin reuptake. Nothing in the references cited by the Examiner teaches or suggests that a structural difference between two SSRIs will predictably alter the treatment response of PMS patients that previously failed initial treatment with an SSRI other than escitalopram. In other words, there is no teaching or suggestion in the cited references that structural differences between two SSRIs will result in improved efficacy of one over the other. This is particularly true in view of the fact that, as disclosed, 40-60% of patients treated with SSRIs fail to respond.

After failure with an SSRI, a skilled artisan would have sought an alternative treatment strategy, such as psychotherapy or administration of a drug that acts by a different mechanism of action. Strategies for addressing treatment failures with SSRIs for other indications have been proposed. Attached hereto is an article describing strategies for treating patients suffering from panic disorder that fail initial treatment with SSRIs (Zamorski, et al., *Practical Therapeutics*, 66(8):1477-1484 (2002) (“Zamorski”) (Attachment A). Zamorski discloses eight strategies for managing patients who have failed initial treatment with SSRIs (*see*

Zamorski, page 1483, Figure 1). Importantly, the authors note that administering a different SSRI (which is what the Examiner asserts would be obvious in this case) makes “the most sense when the patient has had at least a partial response to the first SSRI and the main problem has been side effects rather than lack of efficacy” (*see* Figure 1, footnote ¶). In other words, if a patient failed treatment with an SSRI, as in the claimed population, choosing a different SSRI would not be the next logical course of treatment. In fact, the authors state that common treatment errors in patients who fail SSRI treatment “include sequential trials of multiple agents from the same therapeutic class (*usually SSRIs*)” (*see* Zamorski, page 1482, col. 1) (emphasis added).

Nothing in the cited references teaches or suggests that administration of a different SSRI in the presently claimed population would be advantageous. Nor would a person of ordinary skill in the art reading these references have predicted that treating patients with an alternative SSRI would be successful in such a population. Therefore, the effective treatment of an SSRI-resistant patient with escitalopram would not have been predicted.

For the foregoing reasons, claims 20-38 are not obvious over the cited references, and applicants respectfully request that this rejection be withdrawn.

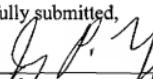
CONCLUSION

In view of the above remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining that the Examiner believes can be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,

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ATTACHMENT A

What to Do When SSRIs Fail: Eight Strategies for Optimizing Treatment of Panic Disorder

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Selective serotonin reuptake inhibitors (SSRIs) are the drug of choice for treatment of patients with panic disorder. Most patients have a favorable response to SSRI therapy; however, 30 percent will not be able to tolerate these drugs or will have an unfavorable or incomplete response. Strategies to improve management of such patients include optimizing SSRI dosing (starting at a low dose and slowly increasing the dose to reach the target dose) and ensuring an adequate trial before switching to a different drug. Benzodiazepines should be avoided but, when necessary, may be used for a short duration or may be used long-term in patients for whom other treatments have failed. Slower-onset, longer-acting benzodiazepines are preferred. All patients should be encouraged to try cognitive behavior therapy. Augmentation therapy should be considered in patients who do not have a complete response. Drugs to consider for use in augmentation therapy include benzodiazepines, buspirone, beta blockers, tricyclic antidepressants, and valproate sodium. (Am Fam Physician 2002;66:1477-84. Copyright © 2002 American Academy of Family Physicians.)

*Members of various medical faculties develop articles for "Practical Therapeutics." This article is one in a series coordinated by the Department of Family Medicine at the University of Michigan Medical School, Ann Arbor. Guest editor of the series is Barbara S. Apgar, M.D., M.S., who is also an associate editor of *AFP*.*

Effective management of panic disorder is a common challenge for family physicians. Selective serotonin reuptake inhibitors (SSRIs) are the drugs of choice for this condition because of their safety and efficacy. While most patients have a favorable response to SSRI therapy, 30 percent will not be able to tolerate these medications or will have an unfavorable or incomplete response.¹ Eight strategies to manage patients who have not tolerated initial therapy or who have had an unsatisfactory response to it are presented here.

Strategy No. 1: When Using SSRIs, 'Start Low, Go Slow, Aim High, and Be Patient'

Because of their safety, tolerability, and efficacy in treating panic disorder and common comorbidities, SSRIs are the first choice of drug therapy for treating panic disorder.^{2,3} The initial activating effects of SSRIs and tricyclic antidepressants (TCAs) can be especially troubling.⁴ As a result, many patients abandon SSRI therapy before they experience any benefits. Following are several strategies to help patients overcome resistance to therapy.

START LOW

Most patients should receive one half of the usual beginning dose of SSRIs and TCAs that would be prescribed for the treatment of depression.^{1,5} For patients who have had negative experiences with other medications or who seem unusually apprehensive, one fourth of the usual beginning dose can be used. Typical starting, therapeutic, and maximum dosages for antidepressants are shown in Table 1.^{1,4,6}

GO SLOW

The dosage of antidepressant should be slowly increased. Clinical experience suggests that seven days is usually an appropriate interval.²

AIM HIGH

Drug response varies with individual patients. Typically, patients who have panic disorder require dosages at the high end of the therapeutic range for SSRIs, and full dosages for TCAs, as shown in Table 1.^{1,4,6} Before switching to a different agent, the highest recommended dosage for a given SSRI should be tried as long as the drug is tolerated.

TABLE 1
Dosage and Price Information for Drugs Used to Treat Panic Disorder

Drug	Class	Usual starting dosage for panic disorder	Typical therapeutic daily dose range	Maximum recommended daily dose	Representative monthly cost**
Citalopram (Celexa)†	SSRI	10 mg once daily	20 to 40 mg	60 mg	\$65 to \$67
Fluvoxamine (Luvox)	SSRI	25 mg once daily	100 to 200 mg	300 mg	\$100 to \$200
Fluoxetine (Prozac)†	SSRI	10 mg once daily	20 to 60 mg	80 mg	\$85 to \$240
Paroxetine (Paxil)†§	SSRI	10 mg once daily	20 to 40 mg	60 mg	\$76 to \$83
Sertraline (Zoloft)†§	SSRI	25 mg once daily	100 to 200 mg	200 mg	\$75 to \$150
Imipramine (Tofranil)	TCA	10 to 25 mg once daily	100 to 200 mg	300 mg	\$6 to \$22
Clomipramine (Anafranil)†	TCA	25 mg once daily	100 to 250 mg	250 mg	\$100 to \$250 (\$66 to \$250)
Alprazolam (Xanax)§	Benzodiazepine	0.25 mg three times daily	2 to 9 mg	10 mg	\$78 to \$312 (\$6 to \$45)
Clonazepam (Klonopin)§	Benzodiazepine	0.25 to 0.5 mg once daily or twice daily	1 to 4 mg	20 mg	\$28 to \$80 (\$23 to \$64)
Venlafaxine (Effexor)	Serotonin-norepinephrine reuptake inhibitor	37.5 mg once daily	150 to 225 mg	225 mg	\$86 to \$150
Nefazodone (Serzone)	Serotonin agonist/antagonist	100 mg twice daily	300 to 600 mg	600 mg	\$79 to \$150
Mirtazapine (Remeron)	Adrenergic and serotonergic antagonist	7.5 mg once daily	15 to 30 mg	45 mg	\$77 to \$78
Phenelzine (Nardil)	MAOI	15 mg twice daily	45 to 90 mg	90 mg	\$150 to \$300 (\$46 to \$92)

SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant; MAOI = monoamine oxidase inhibitor.

*—Estimated cost based on typical therapeutic daily dose range to the pharmacist based on average wholesale prices in *Red Book*. Montvale, NJ: Medical Economics Data, 2001. Cost to the patient will be higher, depending on prescription filling fee.

†—Based on the lowest average wholesale price for a one-month supply (without splitting tablets) for the range of dosages typically used to treat panic disorder. Costs in parentheses are for generic drugs.

‡—Available in liquid formulation.

§—Approved for the treatment of panic disorder by the U.S. Food and Drug Administration.

Information from manufacturers' package inserts and references 1, and 4 through 6.

BE PATIENT

It may take several months for the patient to feel confident that he or she is free of panic attacks. It may take even longer before patients stop avoiding feared situations and are relieved of generalized anxiety. Accordingly, as

long as some meaningful improvement occurs in four to six weeks after initiation of therapy, several months should be allowed to pass before assessing the full effect of the drug and considering a change in therapy.¹

Strategy No. 2: Use Benzodiazepines If Needed, but Use Them Wisely

Benzodiazepines are effective in treating panic disorder⁵; they are also used to treat generalized anxiety disorder and social phobia, two common comorbidities of panic disorder. In contrast to antidepressants, benzodiazepines relieve anxiety within hours,⁷ can

Patients with panic disorder usually require dosages at the high end of the therapeutic range for selective serotonin reuptake inhibitors and full dosages for tricyclic antidepressants.

prevent panic attacks within a few days to a few weeks,⁵ and are free of troublesome activating effects.⁷ Nevertheless, benzodiazepine use in treating panic disorder can be complicated by abuse, physiologic and psychologic dependence, and sedative and neurocognitive side effects.^{7,8}

The following strategies address the problems associated with benzodiazepine use:

- Benzodiazepines should be used to treat panic disorder, even short-term, only when necessary. Patients with unusually severe or disruptive symptoms may be appropriate candidates for short-term benzodiazepine therapy. Some patients who have trouble tolerating the initial activating side effects of antidepressants may also find benzodiazepines helpful during the initial weeks of treatment. Several other treatment options should be exhausted before using benzodiazepines long-term.⁴

- Benzodiazepines should be avoided in patients who are involved in cognitive behavior therapy (CBT), because their use may erode the effectiveness of the therapy.⁹

- Benzodiazepines should be avoided in persons with a history of drug and alcohol misuse.⁸

- Benzodiazepines should not be used on an as-needed basis for panic disorder.⁴ None of the oral benzodiazepines works quickly enough to affect any but the most prolonged panic attacks.⁷ Because panic attacks are self-limited with or without treatment, prescribing a medication to which the patient may attribute relief erodes the efficacy of CBT or self-directed exposure therapy.⁹

- Benzodiazepine therapy should generally be limited to less than one month if possible. Physiologic dependence can develop within one to two months.⁸

- The minimum effective dosage should be prescribed for short-term therapy unless the patient will be using benzodiazepines long-term to prevent panic attacks.⁸ If long-term use is selected, adequate dosages must be prescribed. Lower dosages may control general-

Benzodiazepines should be used with caution; when used, therapy should be limited to less than one month if possible.

ized and anticipatory anxiety but, to prevent panic attacks, daily dosages in the range of 2 to 10 mg of alprazolam (Xanax) and 1 to 4 mg of clonazepam (Klonopin), or the equivalent,⁵ are required (*Table 1*).^{1,4-6}

- Use of fast-acting, short half-life benzodiazepines such as alprazolam and lorazepam (Ativan) should be avoided. While adequate comparative trials are lacking, some evidence⁸ suggests that the slower onset and longer acting benzodiazepines like clonazepam are less likely to be abused, less habit-forming, and easier to discontinue.

Strategy No. 3: Avoid Ineffective Therapies

Beta blockers, once widely touted as effective antipanic medications, have proven disappointing as monotherapy in subsequent placebo-controlled trials.⁵ Buspirone (BuSpar) is ineffective as monotherapy for panic disorder, as is the antidepressant bupropion (Wellbutrin).⁵ Traditional forms of psychotherapy (psychodynamic, insight-oriented, and supportive) have little proven benefit in treating panic disorder, but they may be efficacious in treating comorbidities or to help patients adapt to their condition.¹⁰

Strategy No. 4: Assess and Manage SSRI-Induced Sexual Dysfunction

When directly questioned by a physician, about 60 percent of patients who take SSRIs report experiencing sexual dysfunction, including delayed orgasm, anorgasmia, loss of libido, decreased lubrication, and erectile dysfunction¹¹; that number drops to 14 percent when patients spontaneously report the information.¹² Only 25 percent of these patients with sexual dysfunction report being able to tolerate this side effect—presenting a major

Patients with panic disorder should be encouraged to participate in cognitive behavior therapy.

challenge because of the long-term nature of the treatment.¹²

In general, the sexual dysfunction is dose-related and responds to reductions in the total amount of antidepressant medication used.^{11,12} Occasionally, patients can successfully alter the time of dosing or skip doses prior to sexual activity. This strategy would presumably work best with short half-life agents such as paroxetine (Paxil) or sertraline (Zoloft).¹¹ Because sexual dysfunction is ordinarily a class effect, switching SSRIs is usually not beneficial. Unfortunately, venlafaxine (Effexor) has an incidence of sexual dysfunction similar to that of conventional SSRIs.¹¹

Other alternatives include adding the sedating antihistamine cyproheptadine (Periactin) to the treatment regimen (4 to 16 mg, one to two hours before engaging in sexual activity).¹¹ Limited evidence¹³ also supports the use of bupropion (75 to 225 mg per day with careful attention given to drug interactions), buspirone (average dosage: 50 mg per day), low doses of mirtazapine (Remeron), nefazodone

(Serzone), and yohimbine (Actibine).¹¹ Anecdotal evidence supports the use of Gingko biloba (average dosage: 207 mg per day).¹⁴ Conventional doses of sildenafil (Viagra) have also recently been reported to be successful for this use in women and men.¹¹ Unfortunately, there is not enough systematic evidence to assist physicians in deciding from among this diverse group of therapies.¹¹ Accordingly, the best approach to guide selection of these pharmacologic adjuncts is to consider comorbidities, patient preferences, and the physicians' experience. For example, using the sedating agents mirtazapine or nefazodone would be a good choice for patients with ongoing comorbid sleep difficulties, and sildenafil would be appropriate for the patient whose main problem is erectile dysfunction.

Finally, switching to a different category of antianxiety drug, such as tricyclic antidepressants, is another possibility. Nefazodone¹⁵ and mirtazapine¹⁶ are also likely to be useful in treating panic disorder; use of these agents has a low risk of sexual dysfunction.¹⁷ Benzodiazepines may be an appropriate alternative if there is no contraindication to their use and if patients are not able to tolerate an antidepressant trial.¹⁸ CBT is presumably free of sexual side effects.

Strategy No. 5: Encourage Cognitive Behavior Therapy

CBT, a form of psychotherapy that is usually short-term and focused on symptom resolution through the observation and change of cognitive distortions and their subsequent behaviors, should be encouraged in patients with panic disorder. The basic premise of CBT is that internal cognitive distortions (e.g., "My heart is beating too fast," or "I'm going to die.") are linked with maladaptive behaviors (e.g., fleeing a crowded room), which are then reinforced because this behavior usually temporarily reduces anxiety.¹⁹

The gains made with CBT tend to be maintained after the treatment is discontinued, which is generally not the case for pharma-

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cotherapy.¹⁰ The high initial cost for the treatment may be offset by savings in the cost of long-term medications. CBT is particularly effective for agoraphobic or avoidance symptoms, an area where medication alone has limited benefit.²⁰ CBT can also reduce the risk of relapse during a medication taper.²⁰ Finally, panic disorder may be refractory to medications alone; CBT can be useful in these cases.²¹

Strategy No. 6: When Needed, Use Inexpensive Treatments

One barrier to adequate treatment of panic disorder is the potentially high cost of therapy (*Table 1*).^{1,4-6} The monthly cost of SSRI therapy can exceed \$100 for the higher dosages of medication that are often required.²¹ Imipramine (Tofranil) has proven efficacy in treating panic disorder, depression, and generalized anxiety disorder. The monthly cost of therapy can be as low as \$8.²¹ Generic benzodiazepines are also inexpensive (*Table 1*).^{1,4-6}

Formal CBT programs can cost more than \$1,000 for one course of treatment. Anecdotally, self-help groups like Agoraphobics in Motion, 1719 Crooks Rd., Royal Oak, MI 48067; telephone: 248-547-0400, can be inexpensive and helpful.

Strategy No. 7: Systematically Assess Comorbidities

One reason for a patient to have a suboptimal response to therapy is an incomplete diagnosis.^{1,22} Patients with panic disorder commonly have other comorbidities including mood and anxiety disorders, and substance use.²³ Because these disorders may be associated with panic attacks and anticipatory anxiety²³ and may require distinct treatments,⁴ the diagnosis of panic disorder should consistently trigger a systematic search for other anxiety disorders.²² Because the common comorbidities of panic disorder respond differentially to antipanic treatments, knowledge of these comorbidities also helps in treatment selection.

Unfortunately, most commonly used diagnostic and screening tools for mental health disorders in the primary care setting are not sufficiently comprehensive; the less familiar Mini-International Neuropsychiatric Interview (M.I.N.I.),²⁴ which takes less than 20 minutes to complete, is a more effective screening tool. Finally, it is important to assess the risk of suicide in all patients who have panic disorder.¹⁸

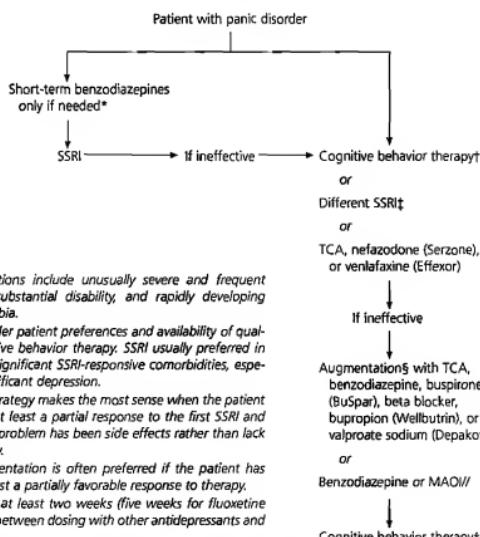
Because panic disorder is a chronic condition that often manifests early in adult life,²⁵ comorbid mood disorders, substance use, and anxiety disorders can develop over time. Accordingly, the development of panic that is refractory to treatment in a patient with previously well-controlled panic disorder should prompt rescreening for these disorders. With increasing age, patients may develop medical comorbidities that can interact with panic phenomenology to produce refractory panic symptoms.²⁶

Strategy No. 8: Use a Rational Sequence of Treatments

Selecting treatments for panic disorder in a rational sequence will presumably decrease the likelihood of a patient becoming refractory to treatment. Several groups^{2,17,27} have proposed guidelines for treatment selection but, except for a general preference to begin with an SSRI or CBT, the recommendations differ. Unfortunately, there are no controlled trials to guide the next therapeutic selection.¹⁸ The recommendations of these groups and the authors' clinical experience are synthesized in the algorithm presented in *Figure 1*.^{1,2,18,27}

Augmentation, the addition of another treatment to a partially effective maintenance drug program, has become popular in the treatment of panic disorder.¹ Buspirone, beta blockers, and bupropion have all been shown to be ineffective as monotherapy; anecdotal evidence supports their use for augmentation. TCAs, benzodiazepines, valproate (Depakote), and CBT may also add benefits to SSRI therapy.¹ Guidelines for the

Treatment of Panic Disorder



*—Indications include unusually severe and frequent attacks, substantial disability, and rapidly developing agoraphobia.

†—Consider patient preferences and availability of quality cognitive behavior therapy. SSRI usually preferred in cases of significant SSRI-responsive comorbidities, especially significant depression.

‡—This strategy makes the most sense when the patient has had at least a partial response to the first SSRI and the main problem has been side effects rather than lack of efficacy.

§—Augmentation is often preferred if the patient has had at least a partially favorable response to therapy.

||—Allow at least two weeks (five weeks for fluoxetine [Prozac]) between dosing with other antidepressants and MAOIs.

FIGURE 1. Algorithm for sequencing treatment for panic disorder. (SSRI = selective serotonin reuptake inhibitor; TCA = tricyclic antidepressant; MAOI = monoamine oxidase inhibitor)
Information from references 2, 18, and 27.

use of augmentation strategies are shown in Table 2.^{1,5,10,28} Because of drug interactions and the potential for side effects and other complexities, a referral to a psychiatrist should be considered before undertaking augmentation.

Common errors in treatment sequencing include sequential trials of multiple agents from the same therapeutic class (usually SSRIs), failure to offer CBT early in the treat-

ment course, initiating chronic benzodiazepine therapy before exhausting other treatment options and failing to consider comorbidities in treatment selection.

Final Comment

The availability of safe, easy-to-use medications has proven to be a boon for primary care physicians who treat patients with mental health disorders. Nevertheless, not all patients

TABLE 2
Augmentation Strategies in the Treatment of Panic Disorder

Strategy	Dosage	Comments
Cognitive behavior therapy	Not applicable	Limited controlled evidence for efficacy
Buspirone (BuSpar)	15 to 60 mg daily	Evidence of efficacy is limited to favorable case reports; especially appropriate for patients with comorbid generalized anxiety disorder or mild depression because of efficacy in treating these comorbidities.
Benzodiazepines	See Table 1.	Growing controlled evidence of efficacy; especially appropriate for patients with another benzodiazepine-responsive condition such as generalized anxiety disorder; check for potential drug interactions, which vary by agent.
Beta blockers	Conventional dosages, which vary by agent	Experience is limited to favorable clinical experience, particularly with patients who have prominent autonomic symptoms.
Bupropion (Wellbutrin)	150 to 450 mg daily	Experience limited to favorable clinical experience; limited experience with use of this strategy in patients with depression; check for potential drug interactions.
TCA ^s	See Table 1; watch for potential drug interactions, which can increase serum TCA levels.	Evidence of efficacy is limited to small case-series; check for potential drug interactions.
Valproate (Depakote)	Conventional mood-stabilizing dosages	Evidence of efficacy is limited to case reports and small case-series; an obvious choice for patients with comorbid bipolar disorder. ¹

TCA = tricyclic antidepressant.

Information from references 1, 5, 10, and 28.

tolerate these medications, and intolerance or partial responses are all too common. The eight strategies described in this article can help primary care physicians optimize the care of these patients.

The authors indicate that they do not have any conflicts of interest. Sources of funding: none reported.

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